

**FLOATING ROADS TRIAL
SYRE, SCOTLAND, UNITED KINGDOM****Ground Improvement****Problem**

Highway Engineers in the Highlands of Scotland have adopted a novel approach to reinforcing low traffic volume rural roads in Sutherland.

Much of their rural road network is single-track and built on very weak ground - mainly peat. This poses no problem for light car traffic but this "floating road" construction is unsuitable for use by heavy vehicles serving the local timber extraction industry.

To reinforce the roadways and bring them up to useable standard without resorting to the importation of huge quantities of stone road-base materials, Highland Council worked with Geotechnical Specialists Maccaferri came up with a more practical and cost-effective solution.

Solution

Three trial roads serving the communities of Syre, Kinbrace and Helmsdale in Sutherland, have had bituminous overlays applied which incorporate Maccaferri Road Mesh™ pavement reinforcement mesh.

Road Mesh™ is a double-twist steel wire reinforcing mesh which is sandwiched between the bituminous layers. This reinforcement mesh causes the pavement construction to work as a cohesive mass, absorbing the horizontal tensile stresses and spreading the imposed traffic loadings over a wider footprint, reducing its damaging effect.

Road Mesh™ not only reduce reflective cracking, but it additionally structurally reinforces the road structure reducing rutting, 'shoving' and differential settlement for the long term.

The pavement reinforcement work is being undertaken as a partnership agreement between Forest Enterprise and the Highland Council. The trials, which started in 2001 and run for 25 years, are also being monitored by The Roadex Project, a multi national technicalcooperation which brings together Northern European countries to share knowledge on forest road construction techniques.

Client: Forest Enterprise/Highland Council

Designer / Consultant: Maccaferri Ltd

Contractor: Private

Products used (Qty.)

Date of construction: 05/1995 - 09/1995

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The B873 reconstructed with Road Mesh™



A tipper truck falls off the Floating Road with dramatic results



The heavy lift recovery vehicle in action